

Reunion, and Kerguelen—the big hot spots—as well as the lesser hot spots, all manifest shallow reference frames (mesoplates).

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Laramide Subduction:

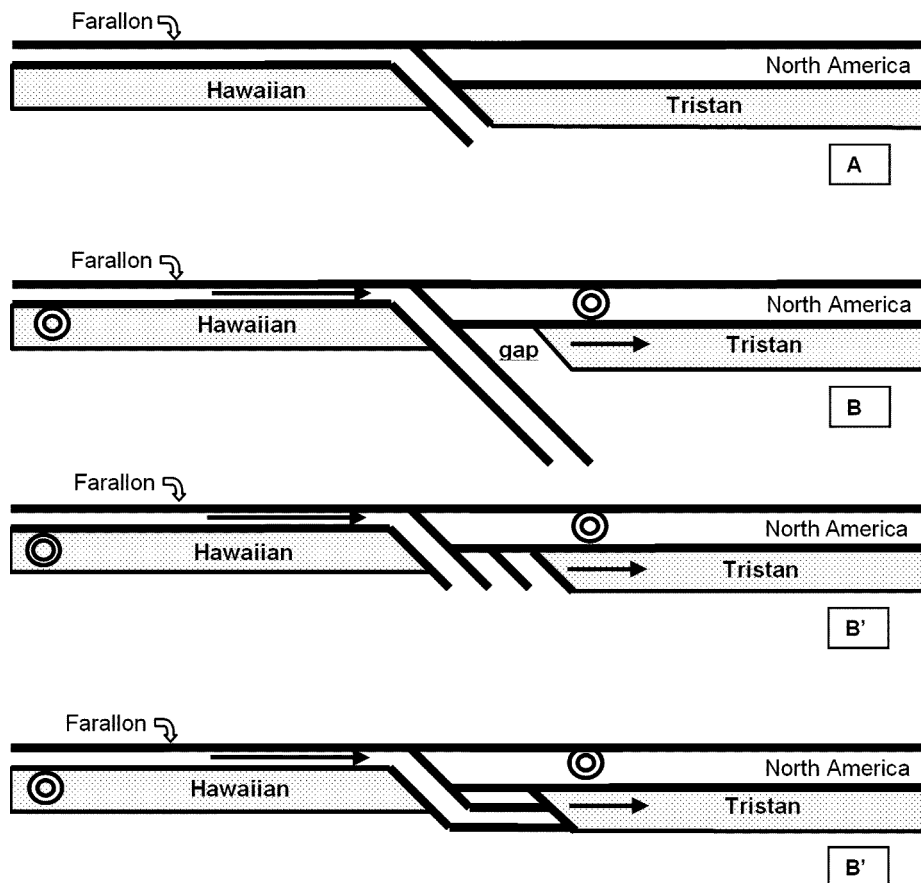


Fig. 3. Cartoons of Laramide evolution of western North America are shown in the context of the mesoplate hypothesis (asthenosphere, separating lithoplates and mesoplates, is not shown). (A) The Laramide event begins ca. 80 Ma. (B) North America moves westerly relative to the Tristan mesoplate. The Hawaiian mesoplate is nearly fixed relative to the North American lithoplate. The Farallon (or Kula) lithoplate continues to be subducted beneath North America with a gap between the subduction zone and the Tristan mesoplate. (B') Same as B, except that the Farallon plate imbricates, filling the gap. (B'') Same as B, except that the Farallon plate subducts at very low angle [Cross and Pilger, 1978], filling the gap.

FORUM

On the Review Process: Editors Speak

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We have read with interest the letters to *Eos* that have discussed the issue of peer review. Although this letter is written largely with the members of the Atmospheric Sciences Section in mind, it may also add some perspective to the general discussion of anonymous reviews.

Due to the volume of papers submitted to the *Journal of Geophysical Research-Atmospheres* (~1200 every year), we have appointed a number of associate editors (currently about 40). These AEs serve in a variety of ways, including recommending reviewers, consulting on papers in their areas of expertise, and assisting when there are potential conflicts of interest. The ultimate responsibility for decisions on all papers,

however, rests with the editors alone. Apparently, this procedure is different from that taken by other journals, as noted by Robert J. Geller and John A. Goff in their letters printed in the 23 September 2003 issue of *Eos*.

It is natural to question how we can handle such a volume of papers without delegating authority for final decisions to AEs. We note that the vast majority of papers are reviewed fairly, yet critically, by our colleagues and do not need extensive editorial attention. In most cases, authors respond positively to the recommendations of the reviewers or respectfully point out where there are genuine differences of opinion. In the case of the latter, we may consult with our AEs who are more knowledgeable in the subject matter of the paper (and whose names are listed as a group on the inside front cover of the journal). However, the final decisions are ultimately ours. Any author

who has concerns about how a paper is handled should raise those with the editor, and not criticize anonymous AEs who are providing an important service to the journal.

Unlike some other journals that only publish a small number of most newsworthy submissions, we do not feel that it is our responsibility to reduce our journal to an arbitrary "shelf-friendly size" by rejecting a majority of the submissions because they may not be of interest to all readers.

Rather, it is our goal to publish excellent science, and to do that it is important that the reviewers and authors enter into a constructive dialogue that will help to reveal and minimize the most important barriers to effective communication of the key results. Sometimes, potentially exciting new ideas are rejected because they are poorly communicated. Sometimes, less exciting results are published because they are well written and accurate. Nevertheless, it is our hope that in all cases, the review process helps to identify errors and to improve the clarity of the writing and figures, so that readers can understand the work and trust the accuracy of the results and the strength of the conclusions.

We feel some need to inform the members of our section that we do not see any serious problem with the current procedure that allows reviewers of *JGR-Atmospheres* to voluntarily sign their reviews. Ultimately, it is our responsibility as editors to recognize when the dialogue is not constructive and to focus it back onto the relevant issues. While a fair number of reviews are signed, the vast majority are not. We do not believe that the reasons for maintaining one's anonymity are only a few. To base radical change on anecdotes, such as those raised in previous letters to *Eos*, would be unwise. However, we do note that hostile responses from authors after a decision to

reject a paper are much more common than hostile reviews.

It is our recommendation that, after receiving a difficult review and unexpected decision, authors take time to adequately digest the contents of the reviews and decision before responding. The strong comments that are expressed in frustration immediately after a rejection only reinforce the views of some reviewers of the need to remain anonymous. Reviewers are performing an important service when they provide thorough evaluations of papers. If they feel that anonymity allows them to offer critical (yet fair) reviews, then we should not attack that value on the basis of a few cases where it is misused. Ultimately,

it is the responsibility of the editor to keep the dialogue constructive. A good editor will quickly learn which reviewers provide well-balanced, fair, and constructive reviews and, likewise, which reviewers to avoid because they do not.

In closing, we would like to take this opportunity to thank our reviewers and associate editors for their continued fine service to the journal. We feel that they are ultimately the force behind our high ranking amongst the geosciences journals.

—COLIN O'DOWD, STEVEN PAWSON, ALAN ROBCK, AND DARIN TOOHEY, Editors, *JGR - Atmospheres*

ABOUT AGU

Climate Change Statement Highlights Human Influence

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A new AGU position statement on human impacts on climate states that "human activities are increasingly altering the Earth's climate." Natural influences alone do not explain the increase in global near-surface temperatures in the latter half of the 20th century, the statement explains.

Announced at a 16 December press conference in Washington, D.C., the statement notes that human impacts include atmospheric greenhouse gases, as well as air pollution, airborne particles, and land alteration.

The statement stresses, "A particular concern is that atmospheric levels of carbon dioxide may be rising faster than at any time in Earth's history, except possibly following rare events like impacts from large extraterrestrial objects.... The unprecedented increases in greenhouse gas concentrations, together with other human influences on climate over the past century and those anticipated for the future, constitute a real basis for concern."

While noting the difficulty in predicting some aspects of human-induced climate change, the statement indicates that scientists are confident in predictions concerning the melting of some polar and glacial ice cover, ocean warming, and changes and intensification of the hydrological cycle.

The statement calls for enhanced research, observations, modeling, computational capability, and educational outreach to support climate-related policy decisions. "AGU also urges that the scientific basis for policy discussions and decision-making be based upon objective assessment of peer-reviewed research results," it says.

The statement was adopted unanimously by the AGU Council at a 12 December meeting in San Francisco, and replaces an earlier 1998 statement that had been reaffirmed in 2002.

Marvin Geller, chair of the AGU panel that drafted the new statement, said it is consistent with statements and assessments by other scientific bodies including the Intergovernmental Panel on Climate Change and the U.S. National Research Council. Geller is with the Marine Science Research Center, SUNY-Stony Brook.

Geller, who is also past president of AGU's Atmospheric Sciences Section, added, "We are not reporting on startling new science here, but rather, the statement is based on the peer-reviewed literature, and much of this has appeared since the last statement was adopted." He noted that while the earlier statement dealt with the issue of greenhouse gases and climate, the new statement also deals with many more human influences.

AGU President Robert Dickinson noted that climate change is an issue advancing relatively rapidly, and some people at the AGU Council meeting wondered "whether this statement is already obsolete, even as it hits the streets." He said, though, that it is unlikely there will be another review of the climate statement for another four years.

Responding to a question about whether all peer-reviewed papers agree with the position statement, Dickinson said, "We are not saying you can't come up with other conclusions by finding one or two papers somewhere. We are saying, if you look at [the peer-reviewed literature] overall and you synthesize the evidence, the statement we are putting [out] here is the consensus view of where we are now."

John Christy, director of the Earth Systems Science Center at the University of Alabama at Huntsville, and a member of the panel that drafted the statement, said, "It is inconceivable that after changing forests into cities or putting dust and soot into the atmosphere, or putting millions of acres of desert into irrigated agriculture and putting greenhouse gases into the atmosphere, that in some way the natural

course of the climate system has not been changed. As a climate scientist, you do come to the conclusion that physically, the system is changing due to the things that humans have done."

Christy said the statement also does not highlight the uncertainty of smaller-scale, regional features in the climate system, such as the decrease in temperature in the southeastern United States over the past 100 years. But he emphasized, "I want to support this [AGU] statement and come out strongly and say, 'it had better be on the radar screen of any administration or political body.'"

The statement does not mention specific temperature projections or focus on some other areas. Geller said that while there has been much attention to the possibility of abrupt climate change, the panel did not address it. "We did not think we knew enough about it at this point to anticipate exactly when that might occur," he said.

Panel member Ellen Druffel, a professor of Earth system science at the University of California, Irvine, said of the overall accomplishment of the statement, "Scientists are in general a conservative bunch. To get the AGU Council and this panel to agree unanimously that humans are changing climate; that in itself is significant."

—RANDY SHOWSTACK, Staff Writer